

ABSTRACT

A distributed air gap material for a induction device in power systems for minimizing fringe losses, mechanical losses and noise in the core. The distributed air gap material occupies a selected portion of the core and is formed of a finely divided magnetic material in a matrix of a dielectric material particles. The air gap material has a zone of transition in which the permeability values vary within the air gap material.

1. The present invention relates to a distributed air gap material for a induction device in power systems for minimizing fringe losses, mechanical losses and noise in the core. The distributed air gap material occupies a selected portion of the core and is formed of a finely divided magnetic material in a matrix of a dielectric material particles. The air gap material has a zone of transition in which the permeability values vary within the air gap material.